



9. Nitrogen Dioxide (NO₂)

Several gaseous oxides of nitrogen are normally found in the air, including nitrogen dioxide (NO₂), nitrous oxide (N₂O), and nitric oxide (NO). There are national and state ambient air quality standards only for NO₂.

NO₂ is a reddish-brown gas that is not usually visible at typical ambient concentrations. High concentrations of NO₂ may reduce visibility. A significant portion of the brownish coloration sometimes observed in polluted air in winter months may be due to NO₂.

N₂O is a stable gas with anesthetic characteristics and typical ambient concentrations well below the threshold concentration for a biological effect. N₂O behaves as a greenhouse gas, thus contributing to global climate warming. N₂O also has been identified as having an important role in the depletion of stratospheric ozone.

NO is a colorless gas with ambient concentrations generally low enough to have no significant biological effect.

Sources

The most important nitrogen oxide emissions result from the burning of fossil fuels such as coal, oil and gasoline. Atmospheric nitrogen and nitrogen compounds in fuel react with oxygen when they burn. The primary combustion product is NO, which reacts with